Vol. 115 Nos. 1 and 2

gene

15 June 1992

W. Szybalski – Editor-in-Chief

CONTENTS

Preface

Ensign, J.C. 1

Molecular biology and biochemistry

Hood, D.W., Heidstra, R., Swoboda, U.K. and Hodgson, D.A. 5–12
Molecular genetic analysis of proline and tryptophan biosynthesis in *Streptomyces coelicolor* A3(2): interaction between primary and secondary metabolism – a review

Fisher, S.H. 13–17
Glutamine synthesis in *Streptomyces* – a review

Wu, P.-C., Kroening, T.A., White, P.J. and Kendrick, K.E. 19–25
Histidine ammonia-lyase from *Streptomyces griseus*

Schottel, J.L., Hale, V. and Babcock, M.J. 27–31
Regulation and secretion of an extracellular esterase from *Streptomyces scabies*

Genetics

Kinashi, H., Shimaji-Murayama, M. and Hanafusa, T. 35–41
Integration of SCP1, a giant linear plasmid, into the *Streptomyces coelicolor* chromosome

Smith, M.C.M., Ingham, C.J., Owen, C.E. and Wood, N.T. 43–48
Gene expression in the *Streptomyces* temperate phage ϕC31

Simonet, J.-M., Schneider, D., Volff, J.-N., Dary, A. and Decaris, B. 49–54
Genetic instability in *Streptomyces ambofaciens*: inducibility and associated genome plasticity

Champness, W., Riggle, P., Adamidis, T. and Vandervere, P. 55–60
Identification of *Streptomyces coelicolor* genes involved in regulation of antibiotic synthesis

Baltz, R.H., Hahn, D.R., McHenney, M.A. and Solenberg, P.J. 61–65
Transposition of Tn*5096* and related transposons in *Streptomyces* species

Sohaskey, C.D., Im, H., Nelson, A.D. and Schauer, A.T. 67–71
Tn*4556* and luciferase: synergistic tools for visualizing transcription in *Streptomyces*

Antibiotic synthesis and resistance

Cundliffe, E. 75–84
Resistance to macrolides and lincosamides in *Streptomyces lividans* and to aminoglycosides in *Micromonospora purpurea*

Hasegawa, M. 85–91
A novel, highly efficient gene-cloning system in *Micromonospora* applied to the genetic analysis of fortimicin biosynthesis

Schoner, B., Geistlich, M., Rosteck Jr., P., Rao, R.N., Seno, E., Reynolds, P., Cox, K., Burgett, S. and Hershberger, C. 93–96
Sequence similarity between macrolide-resistance determinants and ATP-binding transport proteins

Donadio, S., Staver, M.J., McAlpine, J.B., Swanson, S.J. and Katz, L. 97–103
Biosynthesis of the erythromycin macrolactone and a rational approach for producing hybrid macrolides

Distler, J., Mansouri, K., Mayer, G., Stockmann, M. and Piepersberg, W. 105–111
Streptomycin biosynthesis and its regulation in Streptomycetes

Hotta, K., Ishikawa, J., Ogata, T. and Mizuno, S. 113–117
Secondary aminoglycoside resistance in aminoglycoside-producing strains of *Streptomyces*

MacNeil, D.J., Occi, J.L., Gewain, K.M., MacNeil, T., Gibbons, P.H., Ruby, C.L. and Danis, S.J. 119–125
Complex organization of the *Streptomyces avermitilis* genes encoding the avermectin polyketide synthase

Wohlleben, W., Alijah, R., Dorendorf, J., Hillemann, D., Nussbaumer, B. and Pelzer, S. 127–132
Identification and characterization of phosphinothricin-tripeptide biosynthetic genes in *Streptomyces viridochromogenes*

Secondary metabolites and sporulation

Vining, L.C. 135–140
Secondary metabolism, inventive evolution and biochemical diversity – a review

Ōmura, S. 141–149
The expanded horizon for microbial metabolites – a review

Maplestone, R.A., Stone, M.J. and Williams, D.H. 151–157
The evolutionary role of secondary metabolites – a review

Beppu, T. 159–165
Secondary metabolites as chemical signals for cellular differentiation

Horinouchi, S. and Beppu, T. 167–172
Regulation of secondary metabolism and cell differentiation in *Streptomyces*: A-factor as a microbial hormone and the AfsR protein as a component of a two-component regulatory system

McCue, L.A., Kwak, J., Babcock, M.J. and Kendrick, K.E. 173–179
Molecular analysis of sporulation in *Streptomyces griseus*

(Continued on page 271)

(Contents continued from back cover)

Penyige, A., Vargha, G., Ensign, J.C. and Barabás, G. 181–185
The possible role of ADP ribosylation in physiological regulation of sporulation in *Streptomyces griseus*

Ecology

McCarthy, A.J. and Williams, S.T. 189–192
Actinomycetes as agents of biodegradation in the environment – a review

Wellington, E.M.H., Cresswell, N. and Herron, P.R. 193–198
Gene transfer between streptomycetes in soil

Clinical aspects

Schaal, K.P. and Lee, H.-J. 201–211
Actinomycete infections in humans – a review

Beaman, B.L. 213–217
Nocardia as a pathogen of the brain: mechanisms of interactions in the murine brain – a review

Boiron, P. and Stynen, D. 219–222
Immunodiagnosis of nocardiosis

Taxonomy

Goodfellow, M., Ferguson, E.V. and Sanglier, J.-J. 225–233
Numerical classification and identification of *Streptomyces* species – a review

Sanglier, J.-J., Whitehead, D., Saddler, G.S., Ferguson, E.V. and Goodfellow, M. 235–242
Pyrolysis mass spectrometry as a method for the classification, identification and selection of actinomycetes

Korn-Wendisch, F. and Schneider, J. 243–247
Phage typing – a useful tool in actinomycete systematics

Labeda, D.P. 249–253
DNA-DNA hybridization in the systematics of *Streptomyces*

Stackebrandt, E., Liesack, W. and Witt, D. 255–260
Ribosomal RNA and rDNA sequence analyses

Ochi, K. 261–265
Polyacrylamide gel electrophoresis analysis of ribosomal protein: a new approach for actinomycete taxonomy

Author Index Volume 115 (1992) 267–270

Contents continued from back cover 271